

MATH 1324 - Mathematics for Business and Social Sciences

Fall 2025

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Office Hours: MW: 11 am - Noon, TR: 9 am - 10:50 am, Friday: 8 am - 11 am
or by appointment

Note that students are responsible for knowing the policies of SPC as an institution. This information is available in the student handbook. Policies specific to the math department are found in the common course policies preceding this document. Below are the course policies specific to this course section and this instructor.

Materials: The following materials are required for this course

Calculators: You will need a calculator with e^x and \ln keys. These can be found on scientific calculators (inexpensively obtained from Wal-Mart or any other big-box store) or graphing calculators. (NOTE: graphing calculators are nice, but not required for this course.) Online options exist such as Wolfram Alpha (wolframalpha.com), Desmos (www.desmos.com) Desmos also has smartphone apps) or GeoGebra (www.geogebra.org). Smartphone apps such as Panecal or ClassCalc are also available for low cost (or free). All are great for doing homework or studying.

Please note that computer software and mobile apps will not be allowed on exams.

Computer: Access to a computer with stable internet connection will be required for viewing course materials as well as using other software (see “Calculators” above and “Blackboard” below). The use of Chromebooks or other computers running the Chrome Operating System (ChromeOS) is discouraged, as ChromeOS is not always compatible with the software we may be using during this course. If you do not have a computer you may find success using mobile devices in many cases, and you also have access to suitable computers via the computer labs found at every SPC campus.

Blackboard: Blackboard (accessible via the SPC website) will be used as a central hub for the course. You can find this syllabus, and all other course materials, as well as assignments, grading rubrics, etc. You should be checking Blackboard daily for announcements and updates, and to access the homework. Blackboard utilizes students’ SPC email, thus you should also be checking your SPC email regularly.

Gradescope: You will need to submit written documents in this course, via the Gradescope app. You will need access to a smartphone for this app. If you do not have a smartphone, you will need access to a scanner to scan your documents and upload them to Gradescope from your computer. **NOTE:** *When accessing Gradescope, do not create an account to log in. Instead, select the option to use school credentials and then select SPC. You will be able to use your SPC login information to use Gradescope.*

OneNote: *(In-person sections only, optional but highly recommended.)* You should already have access to Microsoft OneNote as an SPC student, and you should have received an email indicating that you have been added to a course (this course) on OneNote. Any student can post questions to their individual notebooks on OneNote, and email me and I can put responses directly into one note. I will also use OneNote to demonstrate problems for students coming in during office hours (in person or virtual). Lastly, any changes made to notes, or additional examples done for the class will be posted there as well as on blackboard.

Expected Learning Outcomes: At the end of this course, students should be able to: competently perform the following:

- analyze functions, using domain, range, and intercepts.
- Use and analyze linear, polynomial, rational, exponential and logarithmic functions to model real-world situations.

- Solve systems of equations and matrices and use them to solve applied equations and linear programs.
- Use exponential and logarithmic properties to solve finance problems, including compound interest, present and future values of annuities, and amortize loans.
- Apply basic probability to calculate expected values and use Markov Chains to model stochastic processes.

Assessment: Grading will be done according to the standard 10 percent scale (i.e. 100% - 90% is an A, etc.) with assignments weighted as follows:

Assignments	16%
Tests	16% (each)
Final Exam	20%

Class Attendance: Attendance is managed by participation in the course (i.e. assignments turned in), however students should be involved with working the course material as often as possible in order to develop mastery of the topics presented.

If a you miss more than 5 assessment items (assignments, quizzes, etc.), you may be dropped from the course with an X or an F.

Students should plan their work time at the beginning of each week so that they are committed in advance to the completion of their assignments. It has been well documented that spreading out study and practice over a longer period of time helps to retain knowledge, create new connections, and gain additional insights into the material.

Assignments: Daily work is essential to developing mastery over the topics presented in this course. Problems may be attempted an unlimited number of times in order to achieve mastery over each lesson. It is important for you to be as thorough as possible in completing the assignments as well as taking notes over the lessons. At the due dates indicated on Blackboard, you will submit your notes and your worked problems over each lesson and assignment on Gradescope.

Exams: There are three midterm exams, one project (graded as an exam), and one final exam. Use of notes, study aids, or technology are not allowed on any exams. Exams that are missed, incomplete, or failed cannot be made up, rescheduled, or retaken.

Section 151: Students in this online section will use Honorlock for testing. Make sure to follow all instructions exactly in order for your exam to be graded. *Note: students have the right to request in-person testing, and coordinate that with me provided there is adequate time **before** the due date of the exam. I also have the right to compel in-person testing for students that fail to meet the testing rules from Honorlock.*

Section 451: Dual Credit students will take exams at their high school campus, and these exams will be administered by your school faculty.

Final Exam: The final exam is comprehensive, and a required part of the course. Failure to take the final exam results in an automatic F in the course. Find your final exam time based on your section below:

003	Wednesday, December 10, 10:15 am- 12:15 pm
604	Monday, December 8, 5 pm - 7 pm
151	Due by Tuesday, December 10 at 5 pm
451	Due by Tuesday, December 10 at 5 pm

Extra Credit: Extra credit is not offered in this course.

Week	Sections Covered	Assignments Due
Week 1	Lesson 1: Probability, Expected Values Lesson 2: Graphs and Equations of Lines	Assignments 1, 2
Week 2	Lesson 3: Applications of Linear Functions <i>9/1: Labor Day</i>	Assignment 3 Case Study: Life Expectancy
Week 3	Lesson 4: Systems of Linear Equations Lesson 5: Matrices; Gauss-Jordan Elimination	Assignments 4, 5 Case Study: Flow Problems
Week 4	Lesson 6: Matrix Operations Lesson 7: Markov Chains	Assignments 6, 7 Case Study: Airline Routes
Week 5	Exam 1 (Lessons 1 - 7) Lesson 8: Matrix Algebra Lesson 9: Input/Output Analysis	Assignments 8, 9
Week 6	Lesson 10: Linear Programming (Graphs) Lesson 11: Linear Programming (Simplex)	Assignments 10, 11
Week 7	Lesson 12: Linear Programming (Dual Problem) Lesson 13: Linear Programming (non-standard)	Assignments 12, 13 Case Study: Diet Problem
Week 8	Exam 2 (Lessons 8 - 13) Lesson 14: Functions Lesson 15: Quadratic Functions and Applications	Assignments 14, 15 Case Study: Maximizing Functions
Week 9	Lesson 16: Polynomial Functions and Applications	Assignment 16
Week 10	Lesson 17: Rational Functions and Applications	Assignment 17
Week 11	Lesson 18: Exponential Functions and Applications Lesson 19: Logarithmic Functions and Applications	Assignments 18, 19
Week 12	Lesson 20: Solving Exponential and Logarithmic Equations Exam 3 (Lessons 14 - 20)	Assignment 20
Week 13	Lesson 21: Simple Interest Lesson 22: Compound Interest	Assignments 21, 22 Case Study: Rule of 72
Week 14	Lesson 23: Annuities - Future Value and Sinking Funds Lesson 24: Annuities - Present Value and Loan Amortization <i>11/26 - 11/28: Thanksgiving Break</i>	
Week 15	Review Week	Assignments 23, 24 Finance Project
Week 16	Final Exam	